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BRIEF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Mary Ann Copas, Secretary

In the Application of Melvin Hatch

Ser.No.: 09/941,029

Filed: August 28, 2001

For: HEAT CONDUCTING SUPPORT FOR CURVED BOTTOM VESSELS

Art Unit: 3727

Examiner: Joseph C. Merek

Commissioner for Patents

Alexandria, VA 22313-1450

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TECHNOLOGY CENTER R3700

APPELLANTS' APPEAL BRIEF

Dear Sir:

Pursuant to 37 CFR 1.192, Appellant hereby files an Appeal Brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(c).

(1) REAL PARTY IN INTEREST

The real party in interest is the assignee, New Mexico Technical Research Foundation.

(2) RELATED APPEALS AND INTERFERENCES

There are no Appeals or Interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

(3) STATUS OF CLAIMS

Claims 1 – 7 and 9 - 18 are pending in the application and have been finally rejected.

(4) STATUS OF AMENDMENTS

In response to the Final Rejection dated 01/31/2003, an amendment was facsimile transmitted on April 15, 2003, and included a new claim 18 and a cancellation of claim 8. Pursuant to an Advisory Action issued 04/25/2003, the aforementioned amendment was entered, and the claims 1 – 7 and 9 –18 were rejected.

(5) SUMMARY OF THE INVENTION

As stated in independent claim 1, and in the specification in the paragraph bridging pages 2 and 3 and also in the detailed description starting on page 4, line 7, as well as shown in the drawing figures, the present invention provides a heat-conducting support for a round or curved bottom vessel, with the heat-conducting support being defined as a metallic unit having an inner portion 21, an outer portion 24, and a base 26 for placement on a heating element, wherein the inner portion 21 has no apertures and is concavely curved to support a vessel, wherein furthermore the outer portion 24 adjoins the inner portion 21, and the outer portion extends away from the upper location 25 where the inner and outer portions adjoin, with the outer portion 24 furthermore extending toward the base 26 where it merges with the base.

As furthermore provided in claim 5, and on page 6, lines 16 – 18, of the specification, at least one of the inner portion, the outer portion, and the base comprise a multi-layer sheet of metal.

As provided in claim 9, and on page 5, line 4, of the specification, the base is

substantially flat.

Pursuant to claim 10, and page 4, line 22, to page 5, line 3, of the specification, the inner portion and the outer portion are a monolithic component, with the base being a separate component to which the outer portion is connected.

In claim 11, and on page 6, lines 3 – 5, of the specification, the base is defined as extending radially outwardly from where the outer portion merges with the base.

Finally, as indicated in claim 18, and on page 6, lines 3 – 8, of the specification, the inner portion and the outer portion define a space that is open in a direction away from where the inner and outer portions adjoin one another.

(6) ISSUES

Whether claims 1, 4, 6 – 8, 11 – 13 and 15 – 18 are anticipated by Golden (U.S. Patent 1,651,346).

Whether claim 5 is unpatentable over Golden in view of Siegel (U.S. Patent 2,691,816).

Whether claim 9 is unpatentable over Golden in view of Emmer (U.S. Patent 2,285,698).

Whether claim 10 is unpatentable over Golden in view of Marguiles (U.S. Patent 2,552,051).

Whether claims 1, 4 – 13 and 15 – 18 are unpatentable over Golden in view of Spremulli (U.S. Patent 1,141,846), and further in view of Siegel for claim 5, Emmer for claim 9, and Marguiles for claim 10.

Whether the drawing proposal for Fig. 1a as submitted with the April 15, 2003 amendment contains new matter.

The Examiner has indicated that, among others, claims 1, 11 and 18 are anticipated by Golden. However, as will be explained in greater detail subsequently, it is respectfully submitted that Golden does not teach every element of, in particular, claim 1, namely an inner portion that is concavely curved to support a vessel.

With regard to the rejection of claims under 35 U.S.C. 103(a) over Golden in view of Spremulli, it is respectfully submitted that the garbage can of Spremulli is not analogous art.

With regard to the disapproval of proposed drawing Fig. 1a in the Advisory Action of 04/25/2003, this disapproval is not understood since page 5, lines 1 – 3, of the specification of the instant application state that the "base could, however, also be a separate piece to which the outer portion is connected in any suitable manner".

(7) GROUPING OF CLAIMS

The rejected claims are grouped as follows:

- a) Claims 1 – 4, 6, 7, 12 – 18, which stand or fall together;
- b) Claim 5;
- c) Claim 9;
- d) Claim 10; and
- e) Claim 11.

(8) ARGUMENT

As indicated previously, the heat-conducting support of claim 1 of the present application requires a metallic unit having an inner portion 21, an outer portion 24, and a base 26 for placement on a heating element, wherein the inner portion 21 has no apertures and is concavely curved to support a vessel having a round or curved bottom, wherein further the outer portion adjoins the inner portion at an upper

location remote from the bottom of the inner portion, and wherein the outer portion extends away from the upper location of the inner portion toward the base and merges with the base.

The Examiner has rejected, among others, claims 1 and 11 as being anticipated by Golden. However, as stated in MPEP section 2131, **TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM.** It is respectfully submitted that Golden in fact does not teach every element of claim 1.

The Examiner has indicated that the bottom of the vessel 3 of Golden is round since the container is circular. However, it is respectfully submitted that within the context of the instant application, when it is stated that the inner portion 21 has a round or curved bottom, it would be commonly understood by one of ordinary skill in the art that within the context of the instant application, where it is stated that the inner portion 21 "is concavely curved", that this does not refer to the circumference, but rather the support surface, which as indicated above is required by claim 1 to be concavely curved, in other words to provide a concavely curved support surface for supporting a substantially complementarily shaped curved or round bottom vessel (see, for example, page 4, lines 7 – 12, of the specification of the instant application). As previously proposed to the Examiner, if the "round" language in claim 1 is troublesome, Appellant is willing to delete same.

It is respectfully submitted that in distinct contrast to the requirements of claim 1 of the present application, Golden does not even provide a heat-conducting support (see, for example, the first column of Golden, lines 5 – 7, which talk about the apparatus being intended for cold sterilizing solution, i.e., Golden is not intended for placement on a heating element, as expressly required by claim 1 of the instant

application). Furthermore, Golden provides a substantially flat support surface since the vessels to be supported are also flat. It should be noted that if a curved or round bottom vessel or flask were to be placed upon the base of Golden, it would tip out of the base thereof. Furthermore, the circular recess 2 of Golden is certainly not contemplated for heat transfer, as evidenced by the language in column 1, lines 40 – 44. Such a recess would probably not even contact the bottom of a curved bottom vessel, and certainly would not provide an adequate heat transfer surface for such a vessel. Thus, it is respectfully submitted that Golden can provide no teaching or suggestion for an inner portion that serves as a support and that, in particular, is concavely curved.

In further support of Appellant's position that Golden can in no way teach or suggest in particular the concavely curved limitation of the inner portion 21 of claim 1 of the instant application, Appellant respectfully submits that the Examiner has himself already recognized that "Golden does not teach this structure", i.e. "the degree that the bottom has to be curved" (see page 6 of the Final Rejection dated 01/31/2003).

With respect to claim 11, in addition to the foregoing arguments, Appellant respectfully submits that Golden does not teach a base that "extends radially outwardly from where said outer portion merges with said base". In particular, since Golden provides a circular "base" 1 (which in reality is comparable to Appellant's outer portion) it is respectfully submitted that Golden does not even teach a separate base, and therefore cannot teach a base that "extends radially outwardly from where said outer portion merges with said base".

With regard to the 35 U.S.C. 103(a) rejections of, in particular, claims 5, 9 and 10, it is respectfully submitted that Golden is also not an appropriate reference pursuant to the first paragraph of MPEP section 2143.03, since not all of the claim limitations have been taught or suggested, so that on the basis of Golden no prima facie obviousness has been established.

Furthermore, with regard to claim 5, there is certainly no suggestion or motivation for combining the multi-layer manufacturing process of Siegel with the sterilizing apparatus of Golden. With regard to claim 9, it is respectfully submitted that the coffee bottle supporting plate and handle of Emmer is in no way analogous art and that one of ordinary skill in the art would not look to such a disclosure for any suggestion regarding improvement of a sterilizing apparatus for cold solution (see first paragraph on page 1 of Golden). Similarly, with regard to claim 10, it is respectfully submitted that one of ordinary skill in the art would not look to the disclosure of a paper sundae dish for any suggestion regarding improvement of a sterilizing apparatus, that is intended for cold sterilizing solution, especially to thereby make obvious Appellant's heat-conducting support.

Finally, with respect to the rejection of claims over Golden in view of Spremulli under 35 U.S.C. 103(a) in order to provide the curved bottom support that Golden does not teach (as recognized by the Examiner on page 6 of the 01/31/2003 Office Action as discussed above), Appellant respectfully submits that Spremulli is certainly not analogous art, and is therefore an improper reference pursuant to MPEP section 2141.01(a).

In particular, the field of endeavor of Spremulli is garbage cans, which is clearly not the same as the heat-conducting support of the present invention.

Furthermore, Spremulli is not reasonably pertinent to the present inventor's problem of providing improved heat transfer to a vessel. It is respectfully submitted that one of ordinary skill in the art would not look to a garbage can disclosure for any suggestion regarding improvement to a heat-conducting support, in other words, a heating mantle or a thermal adapter, which as indicated on page 4 of the specification, lines 7 and 8, are other terms for such a heat-conducting support.

In view of the foregoing discussion, it is respectfully requested that the Honorable Board of Patent Appeals and Interferences overrule the final rejection of claims 1 - 7 and 9 - 18 over the cited art, and hold that Appellant's claims be allowable over such art.

Respectfully Submitted,



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(9) Appendix

1. A heat-conducting support for a round or curved bottom vessel, comprising:

a metallic unit having an inner portion, an outer portion, and a base for placement on a heating element;

wherein said inner portion has no apertures and is concavely curved to support a vessel having a round or curved bottom;

wherein said outer portion adjoins said inner portion at an upper location remote from a bottom of said inner portion; and

wherein said outer portion extends away from said upper location of said inner portion toward said base and merges with said base.

2. A heat-conducting support according to claim 1, wherein said metallic unit is made of heat conductive and essentially non-magnetic metal.

3. A heat-conducting support according to claim 2, wherein said metal is aluminum or copper.

4. A heat-conducting support according to claim 1, wherein said inner portion, said outer portion, and said base are respectively made of a single sheet of metal.

5. A heat-conducting support according to claim 1, wherein at least one of said inner portion, said outer portion, and said base comprises a multi-layer sheet of metal.

6. A heat-conducting support according to claim 1, wherein said outer portion tapers outwardly from said upper location toward said base.

7. A heat-conducting support according to claim 1, wherein said outer portion extends essentially cylindrically from said upper location toward said base.

8. (Deleted)

9. A heat-conducting support according to claim 1, wherein said base is substantially flat.

10. A heat-conducting support according to claim 1, wherein said inner portion and said outer portion are a monolithic component, and wherein said base is a separate component to which said outer portion is connected.

11. A heat-conducting support according to claim 1, wherein said base extends radially outwardly from where said outer portion merges with said base.

12. A heat-conducting support according to claim 11, wherein said inner portion, said outer portion, and said base are a monolithic component.

13. A heat-conducting support according to claim 1, wherein said base is formed by a lower part of said outer portion remote from said upper location of said inner portion.

14. A heat-conducting support according to claim 1, wherein said outer portion has a circular cross-sectional configuration, and said base is square.

15. A heat-conducting support according to claim 1, wherein said bottom of said inner portion is curved or has a small flat section.

16. A heat-conducting support according to claim 15, wherein said bottom of said inner portion is disposed in a plane of said base or is spaced from such a plane.

17. A heat-conducting support according to claim 1, wherein said heating element is an electrical hot plate having a flat surface.

18. A heat-conducting support according to claim 1, wherein said inner portion and said outer portion define a space that is open in a direction away from where said inner and outer portions adjoin one another.